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EXAMINER

LAMB, TWYLER MARIE

ART UNIT

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9

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/514,465

Applicant(s)

MOTAMED ET AL.

Examiner

Twyler M. Lamb

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claims 1, 12 and 23 are objected to because of the following informalities:

In first line of claims 1, 12 and 23, the phrase "using an RIP" should be changed to --using a RIP--.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 5 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 6,441,920) in view of (Barry et al.) (Barry) (WIPO 97/0481).

With regard to claim 1, Smith discloses a method for raster image processing (RIP) (col 5, lines 21-49), using a RIP printer software application (RIPs 34) installed on a networked computer (front ends 40 connected to computer network 35) (col 5, line 66 – col 6, line 9), said RIP application (RIPs 34) adaptable to coordinate with a plurality of other component printer software applications (plurality of software modules included in output manager 41 also referred to as a print drive) (col 6, lines 10-33) associated with one or more printers (out put devices 46) (col 6, lines 34-39) said RIP application (RIPs

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34) having at least one filter (which reads on each RIP containing software and/or RIP module for RIP functions such as screening, trapping, imposition, page or image combination, etc.) (col 6, lines 6-9), comprising the steps of: selecting said RIP application to print a job (which reads on the front end outputting images to the one or more RIPs) (col 5, lines 44-46); sending said job to said RIP application (col 7, lines 43-45).

Smith differs from claim 1 in that he does not clearly teach said filter parsing said job into one or more print pieces; and forwarding said print pieces to said one or more designated printers.

Barry discloses a multiple print engine system that includes said filter parsing said job into one or more print pieces (page 6, line 23 – page 7, line 5); and forwarding said print pieces to said one or more designated printers (page 7, lines 6-9).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Smith to include wherein said filter parsing said job into one or more print pieces; and forwarding said print pieces to said one or more designated printers as taught by Barry. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Smith by the teaching of Barry to ensure that the pages of image are organized and passed to the appropriate printer as taught by Barry in page 6, line 23 – page 7, line 9.

With regard to claim 2, Smith as modified also discloses further comprising an engine if said networked computer is a proprietary server (col 5, lines 21-38).

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With regard to claim 5, Smith as modified also discloses wherein said RIP application works with a plurality of proprietary utilities (col 5, line 66 – col 6, line 9).

With regard to claim 12, Smith discloses a system for raster image processing (RIP(col 5, lines 21-49), using a RIP printer software application (RIPs 34) installed on a networked computer (front ends 40 connected to computer network 35) (col 5, line 66 – col 6, line 9), said RIP application (RIPs 34) adaptable to coordinate with a plurality of other component printer software applications (plurality of software modules included in output manager 41 also referred to as a print drive) (col 6, lines 10-33) associated with one or more printers (out put devices 46) (col 6, lines 34-39) said RIP application (RIPs 34) having at least one filter (which reads on each RIP containing software and/or RIP module for RIP functions such as screening, trapping, imposition, page or image combination, etc.) (col 6, lines 6-9), comprising the steps of: selecting said RIP application to print a job (which reads on the front end outputting images to the one or more RIPs) (col 5, lines 44-46); sending said job to said RIP application (col 7, lines 43-45).

Smith differs from claim 12 in that he does not clearly teach a means for said filter parsing said job into one or more print pieces; and means for forwarding said print pieces to said one or more designated printers.

Barry discloses a multiple print engine system that includes said filter parsing said job into one or more print pieces (page 6, line 23 – page 7, line 5); and forwarding said print pieces to said one or more designated printers (page 7, lines 6-9).

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Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Smith to include wherein said filter parsing said job into one or more print pieces; and forwarding said print pieces to said one or more designated printers as taught by Barry. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Smith by the teaching of Barry to ensure that the pages of image are organized and passed to the appropriate printer as taught by Barry in page 6, line 23 – page 7, line 9.

With regard to claim 13, as modified also discloses further comprising an engine if said networked computer is a proprietary server (col 5, lines 21-38).

4. Claims 3-4, 6-8, 14-15 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 6,441,920) in view of (Barry et al.) (Barry) (WIPO 97/0481) as applied to claim 1 above, and further in view of Tan et al. (Tan) (US 5,978,560).

With regard to claim 3, Smith as modified differs from claim 3 in that he does not clearly teach wherein said other component printer applications comprise an optimum print job balancing component.

Tan discloses a distributed printing system that includes wherein said other component printer applications comprise an optimum print job balancing component (back end module 428) (col 5, line 31 - col 6, line 38).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include wherein said other component

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printer applications comprise an optimum print job balancing component as taught by Tan. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively balance the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38.

With regard to claim 4, Smith as modified differs from claim 4 in that he does not clearly teach further comprising the step of determining, interpreting and implementing job PPD settings.

Tan discloses a distributed printing system that includes further comprising the step of determining, interpreting and implementing job PPD settings (col 5, line 31 - col 6, line 38).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include further comprising the step of determining, interpreting and implementing job PPD settings as taught by Tan. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively balance the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38.

With regard to claim 6, Smith as modified differs from claim 6 in that he does not clearly teach said plurality of proprietary utilities comprises, but is not limited to: a driver utility for a user to interact with RIP application; and a reporting utility for reporting job status and designated printer locations for said printer pieces.

Tan discloses a distributed printing system that includes said plurality of proprietary utilities comprises, but is not limited to: a driver utility (client 200) for a user

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to interact with RIP application (col 2, lines 49-54); and a reporting utility (back end module 428) for reporting job status and designated printer locations for said printer pieces (col 4, line 25 – col 5, line 15).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include said plurality of proprietary utilities comprises, but is not limited to: a driver utility for a user to interact with RIP application; and a reporting utility for reporting job status and designated printer locations for said printer pieces as taught by Tan. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively balance the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38.

With regard to claim 7, Smith as modified differs from claim 7 in that he does not clearly teach wherein said driver utility lists some or all PPD options associated with said other components printer applications.

Tan discloses a distributed printing system that includes wherein said driver utility lists some or all PPD options associated with said other components printer applications (col 2, lines 49-54).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include wherein said driver utility lists some or all PPD options associated with said other components printer applications as taught by Tan. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively



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balance the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38.

With regard to claim 8, Smith as modified differs from claim 8 in that he does not clearly teach wherein said PPD options apply on a per-job basis.

Tan discloses a distributed printing system that includes wherein said PPD options apply on a per-job basis (which reads on each job having a specific identifier) (col 4, line 66 – col 4, line 4).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include wherein said PPD options apply on a per-job basis as taught by Tan. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively balance the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38.

With regard to claim 14, Smith as modified differs from claim 14 in that he does not clearly teach wherein said other component printer applications comprise an optimum print job balancing component.

Tan discloses a distributed printing system that includes wherein said other component printer applications comprise an optimum print job balancing component (back end module 428) (col 5, line 31 - col 6, line 38).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include wherein said other component printer applications comprise an optimum print job balancing component as taught by

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Tan. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively balance the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38.

With regard to claim 15, Smith as modified differs from claim 15 in that he does not clearly teach further comprising the step of determining, interpreting and implementing job PPD settings.

Tan discloses a distributed printing system that includes further comprising the step of determining, interpreting and implementing job PPD settings (col 5, line 31 - col 6, line 38).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include further comprising the step of determining, interpreting and implementing job PPD settings as taught by Tan. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively balance the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38.

With regard to claim 17, Smith as modified differs from claim 17 in that he does not clearly teach said plurality of proprietary utilities comprises, but is not limited to: a driver utility for a user to interact with RIP application; and a reporting utility for reporting job status and designated printer locations for said printer pieces.

Tan discloses a distributed printing system that includes said plurality of proprietary utilities comprises, but is not limited to: a driver utility (client 200) for a user to interact with RIP application (col 2, lines 49-54); and a reporting utility (back end

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module 428) for reporting job status and designated printer locations for said printer pieces (col 4, line 25 – col 5, line 15).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include said plurality of proprietary utilities comprises, but is not limited to: a driver utility for a user to interact with RIP application; and a reporting utility for reporting job status and designated printer locations for said printer pieces as taught by Tan. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively balance the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38.

With regard to claim 18, Smith as modified differs from claim 18 in that he does not clearly teach wherein said driver utility lists some or all PPD options associated with said other components printer applications.

Tan discloses a distributed printing system that includes wherein said driver utility lists some or all PPD options associated with said other components printer applications (col 2, lines 49-54).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include wherein said driver utility lists some or all PPD options associated with said other components printer applications as taught by Tan. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively

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balance the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38.

With regard to claim 19, Smith as modified differs from claim 19 in that he does not clearly teach wherein said PPD options apply on a per-job basis.

Tan discloses a distributed printing system that includes wherein said PPD options apply on a per-job basis (which reads on each job having a specific identifier) (col 4, line 66 – col 4, line 4).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include wherein said PPD options apply on a per-job basis as taught by Tan. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively balance the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38.

5. Claims 9-10 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 6,441,920) in view of (Barry et al.) (Barry) (WIPO 97/0481) as applied to claim 1 above, and further in view of Tan et al. (Tan) (US 5,978,560), Lobiondo (US 5,287,194) and Freedman (US 4,839,829).

With regard to claim 9, Smith as modified differs from claim 9 in that he does not clearly teach by said optimum print job balancing component, further comprising any or all of, but not limited to the steps of: routing said job to a most available printer based on color use, pages per minute, number of pages per said job, size, and number of copies

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for jobs already in a queue and number of copies of said job; automatically splitting said job copies across a specified number of printers meeting specific criteria; automatically splitting a single long job across more than once of said printers; supporting mixed groups of said printers, wherein each of said groups represents a different make or model; monitoring print job status and redirecting said job if an error occurs; supporting job scheduling, allowing said user to specify said job priority, a rush job, and rip and print scheduling in advance; and supporting specified non-proprietary black and white printers.

Tan discloses a distributed printing system that includes by said optimum print job balancing component, further comprising any or all of, but not limited to the steps of: routing said job to a most available printer based on color use, pages per minute, number of pages per said job, size, and number of copies for jobs already in a queue and number of copies of said job (col 5, lines 31-41); automatically splitting said job copies across a specified number of printers meeting specific criteria (col 6, lines 5-38); supporting mixed groups of said printers, wherein each of said groups represents a different make or model (col 6, lines 39-60); monitoring print job status and redirecting said job if an error occurs (col 7, line 63 – col 8, line 19); and supporting specified non-proprietary black and white printers (col 8, lines 20-33).

Lobiondo discloses a printshop management scheduling routine that includes automatically splitting a single long job across more than one of said printers (col 4, lines 16-29).

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Freedman discloses an image forming apparatus that includes supporting job scheduling, allowing said user to specify said job priority, a rush job, and rip and print scheduling in advance (col 12, lines 19-42).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include by said optimum print job balancing component, further comprising any or all of, but not limited to the steps of: routing said job to a most available printer based on color use, pages per minute, number of pages per said job, size, and number of copies for jobs already in a queue and number of copies of said job; automatically splitting said job copies across a specified number of printers meeting specific criteria; supporting mixed groups of said printers, wherein each of said groups represents a different make or model; monitoring print job status and redirecting said job if an error occurs; and supporting specified non-proprietary black and white printers as taught by Tan.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include automatically splitting a single long job across more than one of said printers as taught by Lobiondo.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include an image forming apparatus that includes supporting job scheduling, allowing said user to specify said job priority, a rush job, and rip and print scheduling in advance as taught by Freedman.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively balance

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the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38; by the teaching of Lobiondo to distribute a large job among a plurality of printers as taught by Lobiondo in col 4, lines 16-29; and by the teaching of Freedman to allow a user to send a rush job to the fasted equipment as taught by Freedman in col 12, lines 19-20 .

With regard to claim 10, Smith as modified differs from claim 10 in that he does not clearly teach wherein said rush job requires a user password.

Freedman discloses an image forming apparatus that includes wherein said rush job requires a user password (col 7, line 65 – col 8, line 14).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include wherein said rush job requires a user password. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively balance the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38; by the teaching of Lobiondo to distribute a large job among a plurality of printers as taught by Lobiondo in col 4, lines 16-29; and by the teaching of Freedman to allow a user to send a rush job to the fasted equipment as taught by Freedman in col 12, lines 19-20 and to ensure that user is authorized to access the system as taught by Freedman in col 7, line 65 – col 8, line 14.

With regard to claim 20, Smith as modified differs from claim 20 in that he does not clearly teach by said optimum print job balancing component, further comprising any or all of, but not limited to: means for routing said job to a most available printer based on color use, pages per minute, number of pages per said job, size, and number of

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copies for jobs already in a queue and number of copies of said job; means for automatically splitting said job copies across a specified number of printers meeting specific criteria; means for automatically splitting a single long job across more than once of said printers; means for supporting mixed groups of said printers, wherein each of said groups represents a different make or model; means for monitoring print job status and redirecting said job if an error occurs; means for supporting job scheduling, allowing said user to specify said job priority, a rush job, and rip and print scheduling in advance; and means for supporting specified non-proprietary black and white printers.

Tan discloses a distributed printing system that includes by said optimum print job balancing component, further comprising any or all of, but not limited to the steps of: routing said job to a most available printer based on color use, pages per minute, number of pages per said job, size, and number of copies for jobs already in a queue and number of copies of said job (col 5, lines 31-41); automatically splitting said job copies across a specified number of printers meeting specific criteria (col 6, lines 5-38); supporting mixed groups of said printers, wherein each of said groups represents a different make or model (col 6, lines 39-60); monitoring print job status and redirecting said job if an error occurs (col 7, line 63 – col 8, line 19); and supporting specified non-proprietary black and white printers (col 8, lines 20-33).

Lobiondo discloses a printshop management scheduling routine that includes automatically splitting a single long job across more than one of said printers (col 4, lines 16-29).



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Freedman discloses an image forming apparatus that includes supporting job scheduling, allowing said user to specify said job priority, a rush job, and rip and print scheduling in advance (col 12, lines 19-42).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include by said optimum print job balancing component, further comprising any or all of, but not limited to the steps of: routing said job to a most available printer based on color use, pages per minute, number of pages per said job, size, and number of copies for jobs already in a queue and number of copies of said job; automatically splitting said job copies across a specified number of printers meeting specific criteria; supporting mixed groups of said printers, wherein each of said groups represents a different make or model; monitoring print job status and redirecting said job if an error occurs; and supporting specified non-proprietary black and white printers as taught by Tan.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include automatically splitting a single long job across more than one of said printers as taught by Lobiondo.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include an image forming apparatus that includes supporting job scheduling, allowing said user to specify said job priority, a rush job, and rip and print scheduling in advance as taught by Freedman.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively balance

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the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38; by the teaching of Lobiondo to distribute a large job among a plurality of printers as taught by Lobiondo in col 4, lines 16-29; and by the teaching of Freedman to allow a user to send a rush job to the fasted equipment as taught by Freedman in col 12, lines 19-20 .

With regard to claim 21, Smith as modified differs from claim 21 in that he does not clearly teach wherein said rush job requires a user password.

Freedman discloses an image forming apparatus that includes wherein said rush job requires a user password (col 7, line 65 – col 8, line 14).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include wherein said rush job requires a user password. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively balance the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38; by the teaching of Lobiondo to distribute a large job among a plurality of printers as taught by Lobiondo in col 4, lines 16-29; and by the teaching of Freedman to allow a user to send a rush job to the fasted equipment as taught by Freedman in col 12, lines 19-20 and to ensure that user is authorized to access the system as taught by Freedman in col 7, line 65 – col 8, line 14.

6. Claims 11 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 6,441,920) in view of (Barry et al.) (Barry) (WIPO 97/ 0481), Tan et al.

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(Tan) (US 5,978,560), Lobiondo (US 5,287,194) and Freedman (US 4,839,829) as applied to claim 9 above, and further in view of Takeda (US 6,229,622).

With regard to claim 11, Smith as modified differs from claim 11 in that he does not clearly teach wherein said advance scheduling is up to one week.

Takeda discloses a printer that includes wherein said advance scheduling is up to one week (which reads on the time to begin printing being set as a function) (col 8, lines 32-36).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include wherein said advance scheduling is up to one week as taught by Takeda. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Takeda to allow the time to begin printing to be set as a function by the user as taught in Takeda in col 8, lines 32-36.

With regard to claim 22, Smith as modified differs from claim 22 in that he does not clearly teach wherein said advance scheduling is up to one week.

Takeda discloses a printer that includes wherein said advance scheduling is up to one week (which reads on the time to begin printing being set as a function) (col 8, lines 32-36).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include wherein said advance scheduling is up to one week as taught by Takeda. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by

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the teaching of Takeda to allow the time to begin printing to be set as a function by the user as taught in Takeda in col 8, lines 32-36.

7. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 6,441,920) in view of (Barry et al.) (Barry) (WIPO 97/ 0481) and Tan et al. (Tan) (US 5,978,560).

With regard to claim 23, Smith discloses a method for raster image processing (RIP), (col 5, lines 21-49), using a RIP printer software application (RIPs 34) installed on a networked computer (front ends 40 connected to computer network 35) (col 5, line 66 – col 6, line 9), said RIP application (RIPs 34) adaptable to coordinate with a plurality of other component printer software applications (plurality of software modules included in output manager 41 also referred to as a print drive) (col 6, lines 10-33) associated with one or more printers (out put devices 46) (col 6, lines 34-39) said RIP application (RIPs 34) having at least one filter (which reads on each RIP containing software and/or RIP module for RIP functions such as screening, trapping, imposition, page or image combination, etc.) (col 6, lines 6-9), comprising the steps of: said user selecting said RIP application to print a job (which reads on the front end outputting images to the one or more RIPs) (col 5, lines 44-46); said user sending said job to said RIP application (col 7, lines 43-45).

Smith differs from claim 23 in that he does not specifically teach a user setting appropriate PPD options for a job using a driver utility, said utility interacting with RIP software; said RIP application making print load balancing decisions; said RIP

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application sending said print job to said appropriate one or more printers; said user determining said appropriate one or more printers by using a second utility; and redirecting said job to one or more other printers according to error protocol procedures if an error occurs, wherein said redirection is reflected in said second utility.

Tan discloses a distributed printing system that includes a user setting appropriate PPD options for a job using a driver utility (client 200), said utility interacting with RIP software (col 2, lines 49-54); and user determining said appropriate one or more printers by using a second utility (back end module 428) for reporting job status and designated printer locations for said printer pieces (col 4, line 25 – col 5, line 15); wherein said other component printer applications comprise an optimum print job balancing component (back end module 428) (col 5, line 31 - col 6, line 38); and redirecting said job to one or more other printers according to error protocol procedures if an error occurs, wherein said redirection is reflected in said second utility (col 7, line 63 – col 8, line 19).

Barry discloses a multiple print engine system that includes said filter parsing said job into one or more print pieces (page 6, line 23 – page 7, line 5); and forwarding said print pieces to said one or more designated printers (page 7, lines 6-9).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include said plurality of proprietary utilities comprises, but is not limited to: a driver utility for a user to interact with RIP application; and a reporting utility for reporting job status and designated printer locations for said printer pieces as taught by Tan.

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It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include wherein said filter parsing said job into one or more print pieces; and forwarding said print pieces to said one or more designated printers as taught by Barry.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively balance the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38; by the teaching of Barry to ensure that the pages of image are organized and passed to the appropriate printer as taught by Barry in page 6, line 23 – page 7, line 9.

With regard to claim 24, Smith discloses a system for raster image processing (RIP), (col 5, lines 21-49), using a RIP printer software application (RIPs 34) installed on a networked computer (front ends 40 connected to computer network 35) (col 5, line 66 – col 6, line 9), said RIP application (RIPs 34) adaptable to coordinate with a plurality of other component printer software applications (plurality of software modules included in output manager 41 also referred to as a print drive) (col 6, lines 10-33) associated with one or more printers (out put devices 46) (col 6, lines 34-39) said RIP application (RIPs 34) having at least one filter (which reads on each RIP containing software and/or RIP module for RIP functions such as screening, trapping, imposition, page or image combination, etc.) (col 6, lines 6-9), comprising: means for said user selecting said RIP application to print a job (which reads on the front end outputting images to the one or more RIPs) (col 5, lines 44-46); means for said user sending said job to said RIP application (col 7, lines 43-45).

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Smith differs from claim 24 in that he does not specifically teach a means for user setting appropriate PPD options for a job using a driver utility, said utility interacting with RIP software; means for said RIP application making print load balancing decisions; means for said RIP application sending said print job to said appropriate one or more printers; means for said user determining said appropriate one or more printers by using a second utility; and means for redirecting said job to one or more other printers according to error protocol procedures if an error occurs, wherein said redirection is reflected in said second utility.

Tan discloses a distributed printing system that includes a user setting appropriate PPD options for a job using a driver utility (client 200), said utility interacting with RIP software (col 2, lines 49-54); and user determining said appropriate one or more printers by using a second utility (back end module 428) for reporting job status and designated printer locations for said printer pieces (col 4, line 25 – col 5, line 15); wherein said other component printer applications comprise an optimum print job balancing component (back end module 428) (col 5, line 31 - col 6, line 38); and redirecting said job to one or more other printers according to error protocol procedures if an error occurs, wherein said redirection is reflected in said second utility (col 7, line 63 – col 8, line 19).

Barry discloses a multiple print engine system that includes said filter parsing said job into one or more print pieces (page 6, line 23 – page 7, line 5); and forwarding said print pieces to said one or more designated printers (page 7, lines 6-9).

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Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include said plurality of proprietary utilities comprises, but is not limited to: a driver utility for a user to interact with RIP application; and a reporting utility for reporting job status and designated printer locations for said printer pieces as taught by Tan.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith to include wherein said filter parsing said job into one or more print pieces; and forwarding said print pieces to said one or more designated printers as taught by Barry.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Smith by the teaching of Tan to effectively balance the load one each out put device as taught by Tan in col 5, lines 31- col 6, line 38; by the teaching of Barry to ensure that the pages of image are organized and passed to the appropriate printer as taught by Barry in page 6, line 23 – page 7, line 9.

8. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable (Tan) (US 5,978,560) in view of Lobiondo (US 5,287,194).

With regard to claim 25, Tan discloses a method for optimum print job balancing a user's print job from a networked computer (back end module 428) (col 5, line 31 - col 6, line 38), comprising any or all of, but not limited to, the steps of: routing said job to a most available printer based on color use, pages per minute, number of pages per said job, size, and number of copies for jobs already in a queue and number of copies of



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said job (col 5, lines 31-41); automatically splitting said job copies across a specified number of printers meeting specific criteria (col 6, lines 5-38); supporting mixed groups of said printers, wherein each of said groups represents a different make or model (col 6, lines 39-60); monitoring print job status and redirecting said job if an error occurs (col 7, line 63 – col 8, line 19); and supporting specified non-proprietary black and white printers (col 8, lines 20-33).

Tan differs from claim 25 in that he does not specifically teach automatically splitting a single long job across more than once of said printers.

Lobiondo discloses a printshop management scheduling routine that includes automatically splitting a single long job across more than one of said printers (col 4, lines 16-29).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Tan to include automatically splitting a single long job across more than one of said printers as taught by Lobiondo. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Tan by the teaching of Lobiondo to distribute a large job among a plurality of printers as taught by Lobiondo in col 4, lines 16-29.

With regard to claim 26, Tan discloses a system for optimum print job balancing a user's print job from a networked computer (back end module 428) (col 5, line 31 - col 6, line 38), comprising any or all of, but not limited to: means for routing said job to a most available printer based on color use, pages per minute, number of pages per said job, size, and number of copies for jobs already in a queue and number of copies of

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said job (col 5, lines 31-41); means for automatically splitting said job copies across a specified number of printers meeting specific criteria (col 6, lines 5-38); means for supporting mixed groups of said printers, wherein each of said groups represents a different make or model (col 6, lines 39-60); means for monitoring print job status and redirecting said job if an error occurs (col 7, line 63 – col 8, line 19); and means for supporting specified non-proprietary black and white printers (col 8, lines 20-33).

Tan differs from claim 26 in that he does not specifically teach a means for automatically splitting a single long job across more than once of said printers.

Lobiondo discloses a printshop management scheduling routine that includes automatically splitting a single long job across more than one of said printers (col 4, lines 16-29).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified Tan to include automatically splitting a single long job across more than one of said printers as taught by Lobiondo. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Tan by the teaching of Lobiondo to distribute a large job among a plurality of printers as taught by Lobiondo in col 4, lines 16-29.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Twyler Lamb whose telephone number is (703) 308-8823.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, DC 20231

or faxed to:

(703) 872-9314

(for informal or draft communications, such as proposed amendments to be discussed at an interview; please label such communications "PROPOSED" or "DRAFT")

or hand-carried to:

Crystal Park Two  
2121 Crystal Drive  
Arlington, VA.  
Sixth Floor (Receptionist)

Twyler Lamb



September 29, 2002

MARK WALLERSON  
PRIMARY EXAMINER

